

Attitudes and Behaviour of Adult Pakistani Diabetic Population towards their Disease

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ABSTRACT

Objectives: To assess the variations in attitudes and behaviour towards the disease process and interaction with the social environment of the diabetic persons due to long standing disease.

Methods: This cross sectional study included four hundred participants of both gender, with confirmed type II diabetes for at least 5years. A pre-validated questionnaire was used to evaluate the effects of the disease sufferings on the attitudes and behaviours towards social environment and disease. Frequency analysis was used to analyze the data using SPSS version 16.0.

Results: 31.07% of diabetic population never noticed the change in their behaviour while 43.93% and 25% sometimes and always acknowledged the change in their behaviour, respectively. Less than one third consult their physicians regularly to manage their disease. 47.5% have no hope for their cure and 40% think that they have become a liability to their co-workers. Only 25.5% realize the importance of exercise in disease management. 27.5% of people undergo depression due to diabetes. More than half of the participants had to change their lifestyles after being diagnosed for diabetes. Significantly, less people (5%) believe that their disease has affected their married life.

Conclusion: Sufferings of the diabetic individuals alter their behaviour towards their social environment along with their attitude. The study provides a substantial preliminary data to evaluate the effects of disease process on one's personality which may help to manage the disease more effectively.

Key words: Diabetes mellitus, behaviour, attitude, lifestyle.

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INTRODUCTION

Diabetes Mellitus (DM) is a chronic metabolic disease, marked by decrease in insulin secretion/functions leading to hyperglycaemia. Type 1 diabetes is characterized by a lack of insulin production while Type 2 diabetes is caused by insulin receptor dysfunctions and ineffective use of insulin. It often results from excess body weight and physical inactivity. Diabetes and cardiovascular diseases are included in non-communicable diseases which have now become the main public health challenges, both in the developed and developing countries. As a result of their impact on personal and national health, they are responsible for the premature morbidity and mortality. Worldwide prevalence of diabetes in all age groups reached 2.8% for 2000 and is projected to be 4.4% in 2030 with the

increment in the number of people affected by diabetes from 171 million in 2000 up to 366 million by 2030. Worldwide 285 million people are labelled as diabetic, with type 2 making up about 90% of the cases.¹ Prevalence of diabetes is high, ranging from 7.6 to 11%, in Pakistan. Type 2 diabetes is spreading like an epidemic primarily because of increase in the popularity of a sedentary lifestyle and alarming increase in obesity in younger age group. Obesity due to intake of high calorie diet and lack of exercise plays an important role in insulin receptor dysfunction² leading to diabetes. Also included in its pathogenesis is genetic predisposition, sedentary lifestyle, endocrine disorders and the effects of various medications. An amendment in these elements can bring about protective outcomes not only in adults but also in children who may become affected by diabetes in the near future³.

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For many individuals, the diagnosis of diabetes is accompanied by the need for significant lifestyle changes, others find it difficult or impossible to implement⁴. The social behaviour of an individual towards himself and towards others is impacted by diabetes in a number of ways, may it be his personal life or the interaction with his friends, family members or co-workers. Diabetes may affect the executive

function of our brain⁵ too, reflecting the diverse span of this “altered” lifestyle disease.

Behaviour is best defined as the manner in which one behaves, the actions or reactions of a person or animal in response to external or internal stimuli. An attitude is a personal view of something: an opinion or general feeling about something in a challenging manner. It can be defined as a positive or negative, evaluation of people, objects, event, activities, ideas, or just about anything in the environment⁶. Diabetes, if left untreated can lead to a crippling disease in which the individual not only loses his self confidence but also fails to cope up with his normal way of living, along with other complications that accompany it. It leaves a person feeling depressed and as a liability upon others. Behavioural changes in diabetes are less discussed and highlighted least often when discussing diabetes as a subject. We fail to recognize the various changes in the person’s attitude may it be towards himself or his disease with progression of his illness. Present study is thus designed to calculate the proportions of the diabetic individuals experiencing behavioural changes towards social environment and their attitudes towards the disease. To assess the variations in attitudes and behaviours towards the disease process and interaction with social environment of diabetics due to long standing disease.

METHODOLOGY

This cross sectional study was carried out from the year 2011-2012. Four hundred diabetic men and women were identified randomly from 5 different diabetic centres of Karachi by stratified random sampling. Every fifth patient attending the diabetes OPD fulfilling the inclusion/exclusion criteria was selected from the study. All the participants were adults and educated up till graduation level, belonging to upper middle class families. The researchers introduced the objectives of the study and asked the participants to fill up the questionnaire after verbal and written consent. The questionnaire was presented both in English and Urdu languages with prior validation. Anonymity of participants’ names was maintained for ethical considerations. The questionnaire included seven questions regarding attitudes towards DM and its effect on well being. It encompassed the attitudes regarding knowledge, nutritional information, exercise, weight gain, prognosis and patient-physician relationship. Seven questions evaluated behaviour regarding their lifestyle, fear of the disease, its influence at social gatherings, workplace and married life. Three-point likert’s scale including never (1), sometimes (2) and always (3) as the response to each question was used as a data analysis tool. Frequency analysis was used to calculate the percentage

RESULTS

Four hundred adult diabetic people were identified with equal gender distribution. The ages of the participants ranged from 45 to 65 years, identified randomly from local hospitals and diabetic clinics. They all belonged to upper middle class families. Table 1 shows the questions that were asked regarding their behaviour towards social environment and their attitude towards the disease. The responses are presented as the percentage of total sample in each group.

Table 1 : The Responses of Adult Pakistani Diabetic Population Regarding Behavior towards their Disease

S.No	Behaviour	Never	Sometimes	Always
1	Has your lifestyle changed because of diabetes?	25	47.5	27.5
2	Are you scared of diabetes?	25	45	30
3	Do you find it difficult to discuss about diabetes with your family, friends and co-workers?	25	45	30
4	Has diabetes affected your performance at your workplace?	40	45	15
5	Does your employer/co-workers see you as a liability?	27.5	32.5	40
6	Have you ever gone through depression ever since you were diagnosed diabetic?	27.5	45	27.5
7	Does diabetes have an adverse affect on your married life?	47.5	47.5	5

Overall 31.07 percent think that their behaviour is not at all affected by their disease ranging from one fourth to less than half of the total population. While 68.93 percent of the total population perceive that suffering from disease has somehow affected their behaviour. Strikingly over 50 percent of diabetic people think that the disease has affected their married life while although very less but 5 percent also think that suffering from this disease always affects their married life.

Table 2 : The Responses of Adult Pakistani Diabetic Population Regarding Attitude towards their Disease

S.No	Attitude	Never	Sometimes	Always
1	Does a lack of knowledge about diabetes hinder your attempts of controlling it?	20	34.2	45.8
2	Do you find a lack of nutritional labeling of foods as a challenge, when trying to maintain a healthy diet?	27.5	36.8	35.7
3	Do you want to make changes to the prescribed diet?	37.5	40	22.5
4	Is lack of exercise hindering your ability to control your diabetes?	20	54.5	25.5
5	Does managing your weight seem more improbable since being diagnosed with diabetes?	67.5	24.5	8
6	Do you believe that there is no known cure for diabetes?	47.5	42	10.5
7	How often do you consult a physician for your diabetes?	27.5	62	10.5

Table-2 represents their attitude towards the disease. Overall 35.36 percent of people never noticed the importance of their attitude towards the disease itself

ranging from less than one fourth to more than half of the population whereas a cumulative percentage of 64.56 of the population agreed that their attitude has developed towards the disease. Appreciably more number of people faces a problem in controlling their diabetes due to a lack of awareness (80 percent) and is significantly incapable of controlling their diabetes because of absence of exercise in their daily routines. Lack of nutritional labelling affects more than half of the population's diet plans. Less than half of the people found it difficult to maintain their weight along with the willingness to make changes to their diet. Noticeably some people (47.5 percent) hold a false belief that there is no known cure for diabetes.

DISCUSSION

Diabetes is no more taken as a disease and diabetics are not considered as patients rather it is said to be an "altered" lifestyle. A great number of studies are done and still being conducted to assess the frequency, magnitude and pathogenesis of the physical complications caused by the disease but little emphasis is given to the effect of the disease on everyday living pattern of the people who are affected by diabetes. People suffering from diabetes undergo an experience of varied behavioural changes along with a difference in their attitudes with regards to their lives. Many have reported that type 2 diabetes is preventable by making lifestyle changes and physical activity modulations⁷. Awareness methods can be used to improve the outcomes of diabetes^{8,9}. Present study addresses the behavioural changes of diabetic people with regard to their social environment and towards their disease. 400 diabetic men and women at various diabetic hospitals and clinics were interviewed for the impact of their disease on their daily life through questions about how they are affected by it.

Most of the diabetic population has to change their lifestyle after being diseased (Table 1) and they are also scared of the disease (25 percent) while (45 percent) only sometimes like to share their experience with their family and friends. This seems to be the reason why significantly less number of people never talk about their disease. This behaviour may be explained on the basis of their fear of being considered as weak members of the friend's group, society or the workplace. Most of the people who develop diabetes in the developing nation belong to the working age group therefore the inter relationship of the disease affecting their work and the work affecting the disease in return is an important facet for them¹⁰. There is evidence of the negative impact of diabetes on the ability to work, thus creating an increase in the burden for society¹¹. Though Pakistani diabetic population who participated

in this study admitted that their disease does affect their efficiency but it is only sometimes and their co-workers/employers do not take them as a liability (Table 1).

Diabetic patients are more anxious about their disease and regarding social and vocational impact of diabetes¹². Observed dysfunction includes increasing incidence of depression and environment adjustment issues which needs to be addressed¹³. It is reported that there is an association between depression and the incidence of type 2 diabetes with an insignificant relation between diabetes and risk of depression¹⁴. The results of present study also confirm that less than half of Pakistani diabetic population does not undergo depression (Table 1) and (45 percent) of people think that their depression is only a transient phase occurring sometimes, which is easily coped up due to the positive support from their family members and friends or they are unaware of the major lifestyle changes due to diabetes and/or its complications (Table 1). It has also been reported there is an increased risk of having a new depressive attack in people with type 2 diabetes as compared to normal population & the risk of having this depressive attack maybe more for people who have the complications of diabetes¹⁵. However, the psychosocial stress at the work place doubles the risk of type 2 diabetes¹⁶. Present study also documents that more than half of the diabetic persons think that their performance is affected by their disease process and their employees/co-workers consider them as a liability. This perception may be considered as one of the reason for the depression bouts experienced by the diabetic population.

The outcome of diabetes on the married life of individuals is proven for both men and women. Complications of Type 2 DM include erectile dysfunction along with hypogonadism¹⁷⁻¹⁹. Not only men but also women suffering from DM have an increased risk to develop sexual dysfunction²⁰. Women suffering from diabetes experience multifaceted sexual problems including biological, social and psychosocial factors²¹. Present study reveals that less number of people had an adverse effect on their married life after having being diagnosed with DM (Table 1). No gender variation was noted in the sexual dysfunction due to diabetes. The effect of this progressive chronic disease is not only on the biological aspect of living but also it encompasses all corners of a person's lifestyle, may it be their role in their married life, their life at work, and their fear for the complications²².

The diagnosis of diabetes remains a major factor to limit the effect of the disease upon the individual lifestyles²³. People do not have sufficient information regarding the disease itself; therefore it is often the

manifestations of the complications of the disease that bring the patient to the clinician. In the Asian subcontinent the unawareness regarding diabetes is the cause as to why people refrain to seek medical attention due to which many patients remain undiagnosed until they develop the micro and macro vascular complications of this life altering disease²⁴. Patients lack the necessary information about diabetes which leads to poor compliance especially in the Asian continent, thus increasing the load of this non communicable disease in the region^{25,26}. In the present study more than three fourth of people admit that lack of knowledge about diabetes sometimes/always effects the progression of the disease and alarmingly less number of people go to the physician for their disease management (Table 2).

Mathews (2010) compared type 2 diabetes with black death and specified calorie excess affects lifestyle²⁷ and a lack of food labelling along with meagre advertisement as the culprits of making diabetes a pandemic, further leading to misconceptions about the diabetic diet²⁸. Present study also shows that the lack of nutritional labelling on food items in our general market acts as a hindrance for the diabetic community in controlling their blood sugar along with the difficulty in sustaining their weight (Table 2). Approximately three fourth of diabetic population sometimes/always find it difficult to select food items due to the lack of nutritional labelling which is appropriate for their disease. The lesser degree of awareness (20 percent) may also be the major factor hindering the change in diet.

Increasing physical activity acts as an attitude behaviour that produces positive affects in other behaviours²⁹. Although the benefits of physical activity for diabetic patients are known but it is observed that majority of diabetic people do not exercise due to varying behaviour ranging from the fear of the disease to depression like symptoms and eventually develop more than normal body mass index which adds the risk of type 2 diabetes. In comparison to the west, Asian people develop diabetes at younger ages and at lower degrees of obesity³⁰. Zanuso (2009) related the impact of exercise on the self esteem of the patients and reported significant association between obesity, sedentary living and the risk for diabetes³¹. The results of present study add on the existing data that despite lack of exercise a significant amount of diabetic population did not even acknowledge that it effects the progression of this disease (Table 2).

The misconceptions related to DM pose another factor influencing the social aspects of disease process. The low income families have disbeliefs and false ideas relating to the aetiology, pathogenesis, treatment and

complications about diabetes³². An improvement in the health care system can be beneficial in managing diabetes³³. Lack of income, poor healthcare facilities and unawareness towards the disease influences people's attitude on a greater scale³⁴. The authors found out that considerable number of people thought that diabetes was an incurable disease and it ultimately leads the patient to the death bed.

CONCLUSION

It is concluded that the sufferings from diabetes puts a significant effect on not only one's lifestyle, diet, physical activity but it also alters the behaviour and attitudes towards daily life challenges including job requirements, social and marital life. It exerts serious constraints on a person's living which may also affect his/her surroundings. If people would be educated about this lifestyle deteriorating disease then they shall be able to alter their mode of living without facing the consequences, at their worst. It is strongly recommended that physicians and clinicians put into consideration the challenging effects of diabetes on the physical, mental, social and psychological aspects and manage accordingly.

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